

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 February 2001 (08.02.2001)

PCT

(10) International Publication Number  
**WO 01/09737 A1**

(51) International Patent Classification<sup>7</sup>: G06F 15/16

(21) International Application Number: PCT/US00/14190

(22) International Filing Date: 23 May 2000 (23.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/365,660 - 2 August 1999 (02.08.1999) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

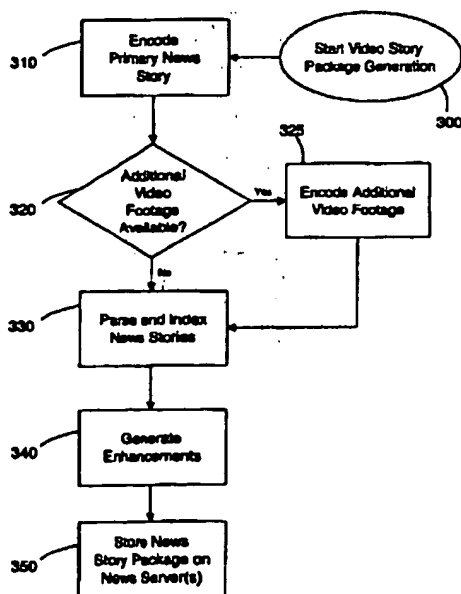
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:  
— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: A SYSTEM AND METHOD FOR PROVIDING NEWSCASTS



(57) Abstract: A computer-implemented method is disclosed for providing a personalized newscast comprising the steps of: generating first news story package (310) based on a first broadcast news story produced by a first broadcast news affiliate; generating a second news story (325) package based on a second broadcast news story produced by a second broadcast news affiliate; and transmitting the first and second news story packages to a user in succession, the first and second news story packages selected to be determined on user's news preferences. Also disclosed is an article of manufacture including a sequence of instructions stored on a computer-readable media which, when executed by network node, cause the network node to: download a digitally encoded news story from a news affiliate, the news story being comprised of a plurality of news segments; inserting an interstitial advertisement (340) between two or more of the news segments; and sequentially transmitting the news segments and inserted interstitial advertisement(s) to a client.

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**A SYSTEM AND METHOD FOR PROVIDING NEWSCASTS****BACKGROUND OF THE INVENTION****Field of the Invention**

This invention relates generally to the field of network transaction services. More particularly, the invention relates to an improved system and method for providing newscasts over a network.

**Description of the Related Art**

Americans have sustained a five-decade long love affair with the local evening newscast. In fact, 56% of Americans name the TV as their primary source of news, more than for all other forms of media combined, including newspaper, magazines and radio. 75% of Americans view a local newscast three or more times per week, with 47% tuning in to a national newscast as well. Viewed this way, a tremendous amount of leisure time is spent indulging in what has become for the majority of Americans a daily after-work ritual. Broadcasters have monetized this activity by selling \$15 billion worth of TV commercials adjacent to news programming.

Developments such as the growth of digital video compression and high-speed Internet access make possible new ways for viewers to consume video news. For example, broadcast news companies such as the Cable News Network ("CNN") have established Internet Web sites (e.g., "www.cnn.com") where users can view selected video news clips.

The video news services provided by these broadcast company Web sites, however, are limited in several respects. First, the broadcast companies operating these sites are limited to carrying their own video news clips. Copyright laws preclude them from carrying video content produced by other (e.g., local, international . . . etc) news services, thereby severely limiting the scope of video news coverage.

Additionally, only a limited number of video news stories (e.g., national headlines) are selected for Internet news distribution on these sites. Accordingly, the only way for users interested in both national and local (e.g., weather reports) video news to obtain the

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video news coverage they need is to search through a variety of different news sites which individually provide only limited coverage.

While many sites today offer personalized services for text news stories (e.g., "My Yahoo") no comprehensive video news collection and distribution system exists. Accordingly, what is needed is an improved system and method for distributing video news over a network such as the Internet. What is also needed is a system and method which seamlessly integrates video news stories from a variety of different video news sources including local, national, and international sources. What is also needed is a system and method which provides users with enhancements to existing video news stories (e.g., related, more in-depth information) and which allows users to actively respond to news stories (e.g., by voicing an opinion on a particular story). What is also needed is a system and method which provides users with an on-demand, personalized newscast based on the preferences of the user, and comprised of video news stories from local, national, and international broadcast news affiliates.

### SUMMARY OF THE INVENTION

A computer-implemented method is disclosed for providing a personalized newscast comprising the steps of: generating a first news story package based on a first broadcast news story produced by a first broadcast news affiliate; generating a second news story package based on a second broadcast news story produced by a second broadcast news affiliate; and transmitting the first and second news story packages to a user in succession, the first and second news story packages selected to be transmitted based on the user's news preferences.

Also disclosed is an article of manufacture including a sequence of instructions stored on a computer-readable media which, when executed by a network node, cause the network node to: download a digitally encoded news story from a news affiliate, the news story being comprised of a plurality of news segments; inserting an interstitial advertisement between two or more of the news segments; and sequentially transmitting the news segments and the inserted interstitial advertisement(s) to a client.

### BRIEF DESCRIPTION OF THE DRAWINGS

A better understanding of the present invention can be obtained from the following detailed description in conjunction with the following drawings, in which:

**FIG. 1** illustrates an exemplary network architecture used to implement elements of the invention.

**FIG. 2** illustrates an exemplary computer architecture used to implement elements of the invention.

**FIG. 3** illustrates a method through which news story packages are generated in one embodiment of the invention.

**FIG. 4** illustrates a graphical user interface included in one embodiment of the invention.

**FIG. 5** illustrates a graphical user interface layout included in one embodiment of the invention.

**FIG. 6** illustrates an exemplary interstitial advertisement implemented in one embodiment of the invention.

**FIG. 7** illustrates one embodiment of the personalized newscast system in which a personalized newscast is compiled for a client/user using digitally encoded news stories.

**FIG. 8** illustrates an exemplary graphical user interface index page.

## **DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS**

### **A SYSTEM AND METHOD FOR PROVIDING PERSONAL NEWSCASTS**

In the following description, for the purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art that the present invention may be practiced without some of these specific details. In other instances, well-known structures and devices are shown in block diagram form to avoid obscuring the underlying principles of the present invention.

Embodiments of the present invention include various steps, which will be described below. The steps may be embodied in machine-executable instructions. The instructions can be used to cause a general-purpose or special-purpose processor, which is programmed with the instructions to perform certain steps. Alternatively, these steps may be performed by specific hardware components that contain hardwired logic for performing the steps, or by any combination of programmed computer components and custom hardware components.

Elements of the present invention may be provided as a machine-readable medium having stored thereon instructions which may be used to program a computer (or other electronic device) to perform a process. The machine-readable medium may include, but is not limited to, floppy diskettes, optical disks, CD-ROMs, and magneto-optical disks, ROMs, RAMs, EPROMs, EEPROMs, magnet or optical cards, propagation media or other type of media/machine-readable medium suitable for storing electronic instructions. For example, the present invention may be downloaded as a computer program which may be transferred from a remote computer (e.g., a server) to a requesting computer (e.g., a client) by way of data signals embodied in a carrier wave or other propagation medium via a communication link (e.g., a modem or network connection).

### **AN EXEMPLARY NETWORK ARCHITECTURE**

Elements of the present invention may be included within a client-server based system 100 such as that illustrated in Figure 1. According to the embodiment depicted in

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**Figure 1**, one or more video news servers 110 communicate to a plurality of clients 130-135. The clients 130-135 may transmit and receive data from video news servers 110 over a variety of communication media including (but not limited to) a local area network 140 and/or a larger network 125 (e.g., the Internet). Alternative communication channels such as wireless communication via satellite broadcast (not shown) are also contemplated within the scope of the present invention.

Video news servers 110 may include a database for storing various types of video news data. This may include specific client data (e.g., client account information and client preferences) and/or more general data (e.g., a digital video news clip of a current weather forecast). The database on video news servers 110 in one embodiment runs an instance of a Relational Database Management System (RDBMS), such as Microsoft™ SQL-Server, Oracle™ or the like.

A user/client may interact with and receive feedback from video news servers 110 using various different communication devices and/or protocols. According to one embodiment, a user logs in to video news servers 110 via client software. The client software may include a browser application such as Netscape Navigator™ or Microsoft Internet Explorer™ on the user's personal computer which communicates to video news servers 110 via the Hypertext Transfer Protocol (hereinafter "HTTP"). In other embodiments included within the scope of the invention, clients may communicate with video news servers 110 via cellular phones and pagers (e.g., in which the necessary transaction software is embedded in a microchip), handheld computing devices, and/or touch-tone telephones.

Video news servers 110 may also communicate over a larger network (e.g., network 125) to other servers 150-152. This may include, for example, one or more servers 150-152 operated by local or national broadcast news affiliates and/or other news organizations.

### AN EXEMPLARY COMPUTER ARCHITECTURE

Having briefly described an exemplary network architecture which employs various elements of the present invention, a computer system 200 representing exemplary clients 130-135 and/or servers (e.g., video news servers 110), in which elements of the present invention may be implemented will now be described with reference to **Figure 2**.

One embodiment of computer system 200 comprises a system bus 220 for communicating information, and a processor 210 coupled to bus 220 for processing information. Computer system 200 further comprises a random access memory (RAM) or other dynamic storage device 225 (referred to herein as main memory), coupled to bus 220 for storing information and instructions to be executed by processor 210. Main memory 225 also may be used for storing temporary variables or other intermediate information during execution of instructions by processor 210. Computer system 200 also may include a read only memory (ROM) and/or other static storage device 226 coupled to bus 220 for storing static information and instructions used by processor 210.

A data storage device 227 such as a magnetic disk or optical disc and its corresponding drive may also be coupled to computer system 200 for storing information and instructions. Computer system 200 can also be coupled to a second I/O bus 250 via an I/O interface 230. A plurality of I/O devices may be coupled to I/O bus 250, including a display device 243, an input device (e.g., an alphanumeric input device 242 and/or a cursor control device 241). For example, video news clips and related information may be presented to the user on the display device 243.

The communication device 240 is for accessing other computers (servers or clients) via a network 125, 140. The communication device 240 may comprise a modem, a network interface card, or other well-known interface device, such as those used for coupling to Ethernet, token ring, or other types of networks.

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**ONE EMBODIMENT OF THE SYSTEM AND METHOD  
FOR PROVIDING NEWSCASTS**

In one embodiment, a consortium of news broadcasters is formed to provide unique, on-demand news story packages for consumers of video news. The news package will include, among other things, a digitally encoded version of the news story as originally broadcast, supplemental video news coverage (e.g., portions of the video news story which were cut from the broadcast), a variety of enhancements (described in more detail below), and ads uniquely tailored to the interests of each news consumer.

*News Story "Packages"*

One embodiment of the system and method for creating news story "packages" will be described with reference to the network illustrated in Figure 1 and the flowchart illustrated in Figure 3. As indicated at 310 the first step in the process is to capture, digitize and encode the primary news story. This step may be accomplished using a video encoding workstation and/or server owned/operated by the broadcast affiliate (e.g., client 160; server 150), or by one or more of the video news servers 110 or clients 130-133 (i.e., operated by the organization implementing the present system and method). Regardless of which servers/workstations are used, the underlying principles of the invention are the same.

Next, if additional video news footage is available (determined at step 320) then this additional footage will also be digitized and encoded at step 325. For example, in the process of producing a news story, a substantial amount of video footage may be cut out so that the story will fit within the strict time constraints required by the news program. Because no such time constraints exist under the present system and method, this additional news footage will be made available for those consumers who want more detail on a particular news story. Once again, the digitization and encoding process may take place at the site of the broadcast affiliate server/workstation (e.g., server 150, client 160) or at video news servers 110, depending on the particular embodiment.

A variety of algorithms may be used to compress/encode the primary news story and additional news footage. In one embodiment, a digital streaming format is used. For



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example, video news stories may be encoded into Real Media's™ G2 format at several different streaming rates to ensure consumers will have the best possible experience should their Internet connection degrade. Real Media's SureStream™ feature may also be used to allow users to jump between different stream rates as their connection bandwidth changes with network congestion. A separate, high speed streaming version may be encoded to target DSL, Cable modem and/or office LAN connections.

Once the encoding process is complete, the news story package is edited using editing software executed on video news servers 110, clients 130-133, and/or workstations 160-162 or servers 150-152 (maintained by broadcast affiliates). For example, as indicated at step 330, the news story may be parsed and indexed to aid in the search and retrieval process. Keywords and abstracts which describe the content of the news package may also be inserted at this stage (e.g., as metatags).

In addition, at this stage some news stories may be broken down into segments, thereby giving the user the opportunity to select which segments he/she wants to watch. For example, news magazines such as "60 minutes™" typically broadcast relatively in-depth stories which include an introduction, several interviews, and a conclusion. By breaking down the story and indexing each of the segments, the present system and method allows a user to select, for example, only the interviews in which he/she is interested. In addition, as described in more detail below, interstitial ads may be inserted in between each of the individual news segments within each news story "package."

Various editing templates are used to streamline the process of producing news story packages. Some of the features included in these editing templates are described in more detail below (e.g., in the sections describing the various news story package enhancements). These templates will be included as part of the video news story workstations/servers, potentially operated by one or more of the broadcast affiliates.

An exemplary graphical user interface 500 (hereinafter "GUI") which may be used by clients – e.g., client 135 – to view news story packages is illustrated generally in Figure 5. The GUI may include a video news player area 510 in which client 135 views

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the actual video news clips. In addition, the GUI 500 may include a station branding and promo link 580 which identifies and provides a link to the station which produced the primary video news story, as well as a list of enhancements 520 associated with the news story (described below). When an enhancement on the list is selected by client 135, the enhancement appears in the enhancement work area 540 to the right of the GUI 500. A navigation tool is provided in the GUI 500 to allow client 135 to navigate between different news story packages and a banner ad space 570 is allocated across the lower portion of the GUI

A more specific embodiment of the GUI is illustrated in **Figure 4**. In this embodiment, client 135 is viewing a video news clip in the window 410 on the left relating to the local high school football team. Specific enhancements related to the football team are listed in area 420 as well as links 430 to other related information. On the right hand side of the GUI is a work-area 440 containing the information related to the video news story. In the example shown in **Figure 4**, this area is filled with the local high school football team's schedule for the year. Various additional features of the GUI will be described in more detail below.

An exemplary index page GUI is illustrated in **Figure 8**. The index page in one embodiment is the first page sent to the user. When the user requests a newscast, video news servers 110 generate the newscast and assemble an index for the newscast based on the user's profile (profile selection is described in more detail below in "personalized newscasts"). Before the newscast actually begins, the user is given the option of rearranging or deleting portions of the newscast from the options page. In the page illustrated in **Figure 8**, for example, the user may simply uncheck the check boxes 810 associated with those stories he does not want in his newscast. The user may also add segments from the "other headlines" portion of the GUI simply by clicking on the desired segment. Once assembled, the user simply selects a play button at the bottom of the segments list to start the newscast.

The user will also be given the option of modifying his/her profile from the index page. For example, if the user's profile calls for a 10-minute newscast and the user only

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has 5 minutes to spare, the user can register this change temporarily and the video news servers 110 will recreate the newscast and generate a new index page.

At step 340 of Figure 3, enhancements are generated that allow clients to both bore down in detail on a story and interact with the story or the station/reporter producing the story. These enhancements may be hard coded into development templates and used with the video editing software described above. The specific enhancements implemented may change over time. However, the following are a description of exemplary enhancements contemplated within the scope of the present system and method:

#### Email to a Friend

This enhancement allows users to email the Universal Resource Locator (hereinafter "URL") of the specific news story package to anyone. By making it simple (i.e., through a click or two) to e-mail the story, this enhancement will help drive additional viewers to the stations' news segments. When the recipient of the news story URL clicks on the link, their browser will be automatically set to the video story package stored on video news servers 110. In addition, they may be provided with the stations' branding and a link back to the stations' home page and the index page on video news servers 110.

To send a link to a particular package, client 135 – who is currently viewing a news story package from video news servers 110 – clicks on an "e-mail to a friend" button 421. In one embodiment, this launches the client's 135 e-mail user agent software (e.g., Lotus Notes™, Microsoft Outlook Express™ . . . etc) and the specific URL address for the news story package auto-populates in the body of the e-mail message. The user then simply fills in the e-mail address and hits "send" to send it to another user (e.g., client 134). In another embodiment, the user's e-mail user agent is not started. Rather, the user is prompted to enter an e-mail address and a text message. The e-mail enhancement will then send the message with the attached video news story package to the indicated address.

### Related Web Sites

Related web sites is an enhancement which does the work of a search engine for people who want additional, related information on a news story, and who either don't want to search or are frustrated with the poor results from third party search engines. Here the video news package editors (e.g., those producing the news story packages) provide a value added service of doing the searching for a viewer ahead of time.

Functionally, the related web sites enhancement may be a brief one line description of a relevant web site and its specific URL. When a user clicks on the "related web sites" button 422, a list of related web sites will appear in the work area, replacing the previous enhancement or ad in that space. The remainder of the page will stay the same with no interruption to the streaming video. This feature may also be included in an editing template so that during the editing process, the editors can simply type the text into the template and the placement of the related web site links will be accomplished automatically.

### Message Board

This enhancement will allow users who are interested in a story to post their thoughts about the story to an online message board. A different message board may be included in each individual news story package to organize postings and to eliminate profanity and/or other unwanted content. In one embodiment, micro-communities of interest are generated, with message boards within each community being focused on a unique subject-matter (e.g., astronomy, New York sports . . . etc). People who post to these boards will then be more likely to come back to view how their comments were received, thereby driving repeat viewers and additional referrals to the video news servers 110.

Functionally, in one embodiment of the system and method, a "message board" button will launch the message board window in which users can post comments on a news story package. On the top of the board may be a short description of the story which the video story package editor will populate. Also included in the message board window

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may be a button that allows a user to "add a story" and a chronological list of the messages submitted by other users.

In one embodiment, the message postings may be filtered to screen out offensive content. For example, when a client submits a message, the message may initially be emailed to a central mailbox with the e-mail "subject" field auto-populated with the story's metadata index identification code (or other identification code). In the case where the affiliate broadcaster (e.g., server 150, client 160) is doing its own development/editing, it will be transmitted to their editor. Alternatively, it may be sent directly to a filtering agent on video news servers 110. Regardless of where it is sent, the message in this embodiment will be screened for offensiveness and will be posted only if it passes certain predetermined screening criteria (e.g., equivalent to a PG-14 rating). The rating system implemented may depend on the particular subject matter at hand. For example, if the news story is one geared towards children (e.g., "FOX Kids News") then a more stringent screening criterion will be implemented.

#### Quizter

"Quizter" is another news story package enhancement which will aid in driving repeat usage and extracting interaction from users. Quizter is a quiz about some aspect of the news story. It allows viewers to demonstrate their knowledge and may provide immediate feedback. Not only does this engage users, but it is also educational, and will be a great way to get children involved in current national and world events.

The quiz button in one embodiment of the system will activate a question related to the story in the enhancements work area 540. Below the question may be a few possible answers with boxes to check. Once the user checks a box and clicks on a submit button, a new screen appears in the work area 540 which indicates whether the user answered correctly. In addition, online quiz contests may be held between users (e.g., with promotional prizes given away).

While the above enhancements work with virtually any news story package, certain additional enhancements may be helpful only for certain types of stories. These additional

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enhancements will be selected based on the subject matter of the story and the broadcast affiliate's news strengths. For instance, a station that wants to make the most out of its news footage may put the cutting room floor footage of an interview up as an extended interview for those who want more, or they may want to promote fun with anchors or reporters by showing outtakes. Affiliates/editors will be able to decide what they want to do in this space to best promote the service and make their viewers happy. In any event, affiliates will have the ability to add a variety of additional enhancements to each story. An exemplary set of additional enhancements are listed below:

### Polling

Polling is a feature which encourages interactivity and is very strong in driving repeat viewers as people come back to see how their opinion stands against that of all other viewers. In one embodiment of the system, polling works in an analogous manner to Quizter, except after the answer is chosen and submitted, all answers will pop up with the current percentage of votes received. Users may be permitted to vote as many times as they like, or, alternatively, may only be allowed a single vote per poll. The polling feature may be locked after some predetermined period of time. For example, one month after the story is featured, people searching and finding it may review the results but will not be able to participate in the poll. The exact timing may vary from one news story package to another.

### Chat

Chat is a news story package enhancement that will allow users to enter into a real time chat room to speak their minds on a particular story or the fundamental issue behind the story. Selecting a "chat" button will launch a window in which an Internet chat room will appear. The mini-window will make it easy for people to shut down the chat session and still be engaged in other video news package services (e.g., the video news story itself). In one embodiment of the system, third party chat vendors may provide the chat enhancement.

### Archive

Archive is similar to the related sites enhancement but it only features related news pages from affiliates of the video news consortium. In one embodiment, this feature may replace the related sites enhancement in an effort to attract more affiliates into the consortium. Editors may have the choice of searching only their own station's past related stories or past stories from all of the affiliates. When a viewer clicks on the archive button, a set of hyperlink descriptions will appear in the work area, directed to a related, additional news story package.

### Map

Map is another value added enhancement which will be implemented in one embodiment of the system. Mapping may show where the story within the news story package actually occurred. The map feature may include the ability to zoom in and out to receive more or less mapping detail. In one embodiment, the map will include the user's location in relation to the story, thereby illustrating the relevance of the story to the viewer. This feature may be configurable by the user so that a map only appears if the story occurred within a particular distance from the user's home and was of a particular subject-matter (e.g., murders or robberies within four miles of the user's home).

During production, the news story package editing tools may be configured to ask the editor what city/address should be mapped. The editing tool will then retrieve a map and place it in an editing template so that it appears in the work area. The editing tools may also allow the editor to zoom in or out before map placement.

### Depth

This enhancement will allow the video editors to conduct original or web research and include more detailed information within a news story package. Many users will want supplemental information and, in fact, this feature may be what drives them to re-watch the newscast. In addition to their own research, affiliate editors will have access to other affiliate's research such as still shots, scanned pictures or graphics and related text stories (e.g., in Word, Powerpoint format . . . etc). When the news package editor selects this option, he/she may be provided with a work area in an editing template where he/she can

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cut and paste the information they would like to add. A one line descriptive hyperlink may then be used to retrieve the information for the end user.

### Extra Video

As described above, the ability to post extended interviews that today go to the cutting room floor or bloopers that face the same fate can instead be used as news story package enhancements. The "extra video" enhancement allows viewers to see a second video clip on the same story. When a user selects this hyperlink, a second video player (e.g., Real Media's G2 player) will be opened in the enhancement work area 540. It may automatically pause the primary story if it is still playing when the second player is launched. The editor may simply encode a second story manually, index it and upload it to the streaming server (e.g., one of the video news servers 110).

### Feedback

This enhancement is a great tool for those broadcast news affiliates who have the resources to interact with their viewers. It will allow viewers to send information and thoughts about a story directly to the anchors, reporters and even the subjects of the story, simply by clicking on a hyperlink. Functionally, this enhancement may also appear in the work area. In one embodiment, it consists of a pull down menu of people's names those to be e-mailed. A message area immediately below that and will allow a user to type a fixed amount of text. When the submit button is selected by the user, an email will then be launched to the selected individual (e.g., via the user's email client).

### Audio Text

In one embodiment, the full text of the audio of a broadcast story will be included in the video news story package. This enhancement may be particularly useful feature for individuals with hearing disabilities.

### Audio/Image Enhancements

Other enhancements contemplated within the scope of the system include the ability to conduct and record phone interviews about the stories and make the interviews available to users. In addition, users in one embodiment will be allowed to phone into an



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online voicemail system (e.g., a networked VOX system) to record their feedback or opinion on a particular story. This audio user comments would be made available as an enhancement to other users. Finally, another enhancement includes the text and photos from related newspaper and/or magazine articles provided by print-based news affiliates or audio clips provided by radio-based news affiliates.

### *Personalized Newscasts*

In one embodiment of the system and method, customized newscasts, including news story packages produced from different affiliates, are compiled based on the unique preferences of individual users. The user's preferences may be determined in various ways including, for example, an initial registration process, and/or by monitoring the activities of that user (e.g., how much time does the user spend viewing certain types of news stories, what types of ads does the user respond to . . . etc).

A user ID and password may be assigned that enables multiple users to access their own personalized newscast from the same client machine. The GUI in this embodiment includes a user name field 830 and a password field 840 which allows each user to log on using their individual passwords. When a new user logs on, the new user information is transmitted to video news servers 110.

A user's personal newscast profile may be generated based on (among other variables) the user's geographic, topical, and session duration preferences. For example, if a user grew up in New York City and subsequently moved to San Francisco, that user's news profile might include sports news story packages from New York affiliates, weather and local news story packages from San Francisco affiliates, and major national news story packages from national and/or local affiliates. He may also indicate that he wants to spend no more than 15 minutes per day watching his personal newscast. Subsequently, when the user logs in to video news servers 110, a personal newscast will be transmitted to him, specially assembled based on his preferences (i.e., including one or more sports news story packages from a New York affiliate, a weather news story package from a San Francisco affiliate, 15-minute time limit . . . etc).

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One embodiment of the system will allow users to dictate the sequence of their newscast (e.g., start with sports, end with traffic). In addition, the system may also prompt users to enter key words for inclusion or exclusion of certain topics (e.g., give me any story about Parkinson's disease, regardless of where it occurs, and I don't ever want to see stories about Monica Lewinski). Similarly, users will be able to filter out stories based on level of depicted violence or sexual content. Finally, the system may allow users to flag news sources and/or reporters from which the user always (or never) wants to receive stories.

An alternative embodiment of the system will allow users to select "avatars" including those of famous people which will help reduce the information required during the registration process. For example, users will have the option of selecting the same newscast as Henry Kissinger or, perhaps, a local personality.

Figure 7 illustrates one embodiment of the personalized newscast system in which a personalized newscast 720 is compiled for a client/user 135 using digitally encoded news stories 710, 711, and 713 and/or interstitial advertisements (see below) 712, 714 from various broadcast affiliate servers 150 and 151 and/or advertisement servers 730. Servers 150 and 151 in this embodiment may be maintained by two different affiliate stations and server 730 may be maintained by an advertisement service.

Accordingly, in the embodiment illustrated, when client/user 135 logs in to video news servers 110 to view his personal newscast he will see, in succession, a interstitial advertisement 710, a video news story from a first affiliate 711 (i.e., transmitted from server 151), a second interstitial advertisement 712, and two video news stories 713, 714 from a second broadcast affiliate (i.e., transmitted from server 150). In addition, a plurality of enhancements 741, 743, and 744 (as defined herein) may be associated with the news stories 711, 713, and 714, respectively, (as indicated by the connector lines) and concurrently transmitted to client 135.

In one embodiment a list of upcoming news stories produced by each of the broadcast news affiliates will be maintained on video news servers 110. Once a user's

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preferences are recorded (as described above), that user may be e-mailed a notification that a story on a topic related to their preferences will be aired by a particular affiliate.

In one embodiment of the system, if a user is viewing his personalized newscast when breaking news occurs, the user will be notified (e.g., in the form of a "breaking news" banner) of the presence of the breaking story. The user will then have the option of pausing the newscast to receive a live webcast of the breaking story.

The personalized newscast in one embodiment is transported to the user over the Internet (e.g., network 125), preferably over a high-speed connection, to be viewed over a standard multimedia computer (e.g., client 135). However, it should be noted that the underlying principles of the personalized newscast may be implemented on web-enabled TV sets, home-based video storage devices and video-on-demand systems.

For web-enabled TV sets, enhancements may be inserted for a particular news story in either the Vertical Blanking Interval or Digital TV Spectrum, or both, of the actual TV broadcast signal, permitting the viewer to view the high quality live broadcast video signal at the same time as having these enhancements either overlayed or next to a shrunk video window (as in Picture-In-Picture). For Video-on-demand, one embodiment of the system will assemble a personalized newscast for a particular viewer (as before) but then stage their newscast on a server in the head-end of their cable TV provider, who may then assign an unique digital channel for that viewer over which their personalized newscast is transmitted. Instructions may be downloaded to "home based video storage devices" telling them when and what channels to tune into to store high quality broadcast news. Playback instructions may also be downloaded to these devices including enhancements. These instructions may also tell the device which video clips to use and in which sequence.

#### ***Advertisements***

In one embodiment, the video news services described above are, like TV, supported by advertisers and are therefore free to the end user. In addition to utilizing traditional banner ads, "interstitial" ads may be inserted between different news stories or

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between the segments which comprise individual news stories (e.g., lengthy news magazine stories such as those produced by "60 Minutes"). These interstitials typically consume the entire screen. One example of an interstitial ad is illustrated in Figure 6.

In fact, there are a variety of interstitial ads. Three particular types are: Immediate, Forced and Interactive. The immediate interstitials allow users to immediately click past them, but they still have the full screen impact. Forced interstitials prohibit users from bypassing them for a period of time – 5 seconds, for example. At the end of 5 seconds, the newscast may automatically begin again or, alternatively, the resume newscast button may appear. Animation or similar other activity may be included in these ads to provide entertainment for the user while they are waiting.

Interactive interstitials may include a hyperlink to the advertiser's Web site. Accordingly, if a user clicks anywhere on the ad, it takes them to the advertiser's site. Alternatively, the user interactivity may be provided directly by the video news servers 110. The types of information provided to/from the user within interactive interstitials may include, for example, additional product information; address/phone number/directions/store hours; link to their web site; e-mail response for additional information. Some interstitials will include the necessary fields to allow a user to immediately purchase the product/service online.

Interstitials have the impact of TV commercials, permit detailed copy as with newspaper and magazine, have the targetability of direct mail and the sales or lead generation potential of outbound telemarketing. They may include streaming media functionality but can also include flash animation, Quicktime VR, an applet or static graphics which will allow the next video to pre-load. For example, the ads may be comprised of both video and audio and, in one embodiment, may even be encoded from the advertiser's broadcast TV commercials.

Aside from interstitials, three additional areas for ads are the index page, the primary banner space 570, and the station banner space 580. In the embodiments illustrated in Figures 4 and 5, the primary banner ad 570 appears at the bottom right of the

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personalized newscast pages. Hence, for a personalized newscast comprised of 5 stories a day, there will be 6 Primary Banner Ad slots to fill each day (index page plus each story page). In one embodiment the ad will always be viewable when the page initially loads without the user having to scroll.

As illustrated, a significant portion of ad space 580 may be set aside and dedicated for affiliate stations to use at their discretion. The intent of this space is for the station to use it to drive viewers back to its core broadcast services by promoting, for example, the news, the night's line up or a particular show. Additionally, the ad could also be used to promote other corporate media and service holdings. This station ad in one embodiment of the system is sole property of the affiliate who owns/runs the station providing the news story package in which the ad is embedded. The frequency with which this ad changes may also be the decision of the affiliate station.

In one embodiment, an index page will be generated with a screen shot of the story and a hyperlink back to the story. With 5 or 6 stories, this still leaves the enhancement work area of the VNB page open for an ad. This index page ad may be considered a premium ad because it is the first page of the service and hence will have a lot of viewers. The space it occupies is normally home to content and therefore, viewers should be more drawn to the ad space. Finally it may be larger than traditional banner ads, thereby further contributing to its visibility.

For advertisers, one of the powerful aspects of one embodiment of the system is the ability to deliver targeted ads to consumers. Based on the preferences of a particular user (e.g., based on the user's particular newscast selection, based on the user's geography . . . etc), it will be very easy to deliver ads to people who are interested in narrowly-focused subjects (e.g., show only sports ads if the user only signs up for sports video news packages).

Advertisement targeting variables which may be factored in by advertisers when making a targeting decision include (but are not limited to) user geography (state, or zip code based), residence and/or user interest; story type (e.g., headlines, sports, weather,

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business, leisure/entertainment, computers/technology, politics/government, consumer, health fitness, travel and traffic); demographic cluster (e.g., similar to PRIZM™ or Claritas™); and/or user connection rate (e.g., 56k, ISDN, DSL . . . etc).

In addition, each of the foregoing variables may be weighted by different amounts. For example, the type of story selected by the user may be given a weight of 70% while the user's geographical information may be given a weight of 30%. The specific weight to give any individual variable may be based on compiled marketing research.

One embodiment will allow advertisers to participate in virtual sponsorship of personalized newscasts. Unlike a traditional sponsorship which is directed towards an entire news program or sporting event, a virtual sponsorship will allow an advertiser to sponsor only a portion of a user's personalized newscast. For example, if a user's personalized newscast is comprised of local weather followed by sports, followed by national headlines, then a sports shoe advertiser (e.g., Nike), for example, would have the ability to sponsor only the sports portion of the user's newscast. The ad would appear either before, during or after the sports portion of the newscast.

### *Navigation Tools*

The navigation tools area 490 (Figure 4), 590 (Figure 5) is dedicated to making the user experience easier. The tools in one embodiment drive all traffic back to other parts of the video news system or to affiliate stations' web pages. The tool consists of a plurality of hardwired buttons (i.e., hardwired because they will always appear). These buttons allow the user to navigate through the system regardless of when the news story package was generated (archived or fresh, it will take the user to that day's home page as opposed to the home page when the story was created). The tools consist of the following segments:

First, a help button is included within the navigation tools area 490, 590. Selecting the help button will provide a user with detailed information about the news system, frequently asked questions, instructions on how to navigate, ways to contact news story package providers for feedback, and/or information on privacy. Much of the detailed

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information may relate to the technology supported (e.g., which browsers and plug ins are required for the full user experience). Links will also be provided here to the creators of the needed software (e.g., Web browsers) and plug-ins.

A link to affiliates' Web sites may also be included in the navigation tools area 490, 590, as well as a link back to the video news servers 110 home page. In the latter embodiment, clicking on the link will take the user back to the day's summary page on video news servers 110.

In one embodiment, a search button may also be included in the tools area 490, 590. Clicking on this button in one embodiment launches the search engine in the enhancement work area 440, 540. Users may search based on various criterion including, for example, keyword, dates, areas of the country, topic . . . etc. Once a search is submitted, a list of stories will be generated in the enhancement work area. At the bottom of the list of stories, a "refine search" button may be provided so that users can add additional search criterion (e.g., if the initial list is too long).

Two additional buttons included in one embodiment of the tools work area 490, 590 are "previous story" 490 and "next story" 491. These buttons (as indicated) may be used to jump sequentially between the various news story packages transmitted to a user.

Throughout the foregoing description, for the purposes of explanation, numerous specific details were set forth in order to provide a thorough understanding of the invention. It will be apparent, however, to one skilled in the art that the invention may be practiced without some of these specific details. Accordingly, the scope and spirit of the invention should be judged in terms of the claims which follow.

**CLAIMS**

What is claimed is:

1. A computer-implemented method for providing a personalized newscast comprising the steps of:
  - generating a first news story package based on a first broadcast news story produced by a first broadcast news affiliate;
  - generating a second news story package based on a second broadcast news story produced by a second broadcast news affiliate; and
  - transmitting said first and second news story packages to a user in succession, said first and second news story packages selected to be transmitted based on said user's news preferences.
2. The computer-implemented method as claimed in claim 1 further including the step of transmitting an interstitial advertisement to said user between transmission of said first and second news story packages.
3. The computer-implemented method as claimed in claim 1 said first and/or second news story packages include enhancements.
4. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is additional news footage which was not included in the original news story as broadcast.
5. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is an e-mail enhancement which allows a user to send an e-mail with a hyperlink to one of said news story packages.
6. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is a group of hyperlinks to network sites which include additional information related to the subject matter of one of said news story packages.



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7. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is a message board on which users may post opinions on one or more of said news story packages.

8. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is a quiz about some aspect of one of said news story packages.

9. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is a poll for questioning users about an aspect of one of said news story packages.

10. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is a map which indicates the location where one of said broadcast news stories occurred.

11. The computer-implemented method as claimed in claim 3 wherein one of said enhancements is an e-mail enhancement which allows users to e-mail the anchors, reporters or subjects of one of said news stories.

12. The computer-implemented method as claimed in claim 1 wherein said user's news preferences are determined based on a user registration process.

13. The computer-implemented method as claimed in claim 2 wherein said interstitial advertisement is selected based on the content of one of said news story packages transmitted to said user.

14. A computer-implemented method for providing video news story packages comprising the steps of:  
digitally encoding a first news story originally broadcast by a broadcast affiliate;  
digitally encoding additional video news story footage compiled during the production of said first news story but not broadcast by said broadcast affiliate;

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associating said digitally encoded first news story and additional video news story  
footage; and

providing user access to said digitally encoded first news story and additional  
footage through a graphical user interface.

15. The computer-implemented method as claimed in claim 14 including the  
additional step of generating additional enhancements related to said first broadcast news  
story.

16. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is an e-mail enhancement which allows a user to send an e-mail with a  
hyperlink to said digitally encoded first news story.

17. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is a group of hyperlinks to network sites which include additional  
information related to said first news story.

18. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is a message board on which users may post opinions on said first news  
story.

19. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is a quiz about some aspect of said first news story.

20. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is map indicating said first news story's location.

21. The computer-implemented method as claimed in claim 15 wherein one of  
said enhancements is a poll for questioning users about some aspect of said first news  
story.

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22. The computer-implemented method as claimed in claim 15 wherein one of said enhancements is an e-mail enhancement which allows users to e-mail the anchors, reporters or subjects said first news story.

23. An article of manufacture including a sequence of instructions stored on a computer-readable media which, when executed by a network node, cause the network node to:

download a digitally encoded news story from a news affiliate, said news story being comprised of a plurality of news segments;

insert an interstitial advertisement between two or more of said news segments;

and

sequentially transmit said news segments and said inserted interstitial advertisement(s) to a client.

24. The article of manufacture as claimed in claim 23 including the step of indexing each of said news segments.

25. The article of manufacture as claimed in claim 23 wherein a subset of said news segments are transmitted to said client responsive to said client's news preferences.

26. The article of manufacture as claimed in claim 25 wherein client's news preferences include the preference of not viewing the introduction segment.

27. The article of manufacture as claimed in claim 25 wherein client's news preferences include the preference of only viewing the interview segments.

28. The article of manufacture as claimed in claim 25 wherein said interstitial advertisements inserted between segments are selected to be inserted based on said client's news preferences.

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29. The article of manufacture as claimed in claim 25 wherein banner advertisements are displayed during one or more of said news segments.

30. The article of manufacture as claimed in claim 29 wherein said banner advertisements are selected based on said client's news preferences.

31. The article of manufacture as claimed in claim 25 wherein one of said client's news preferences a length of time for viewing all of said news segments.

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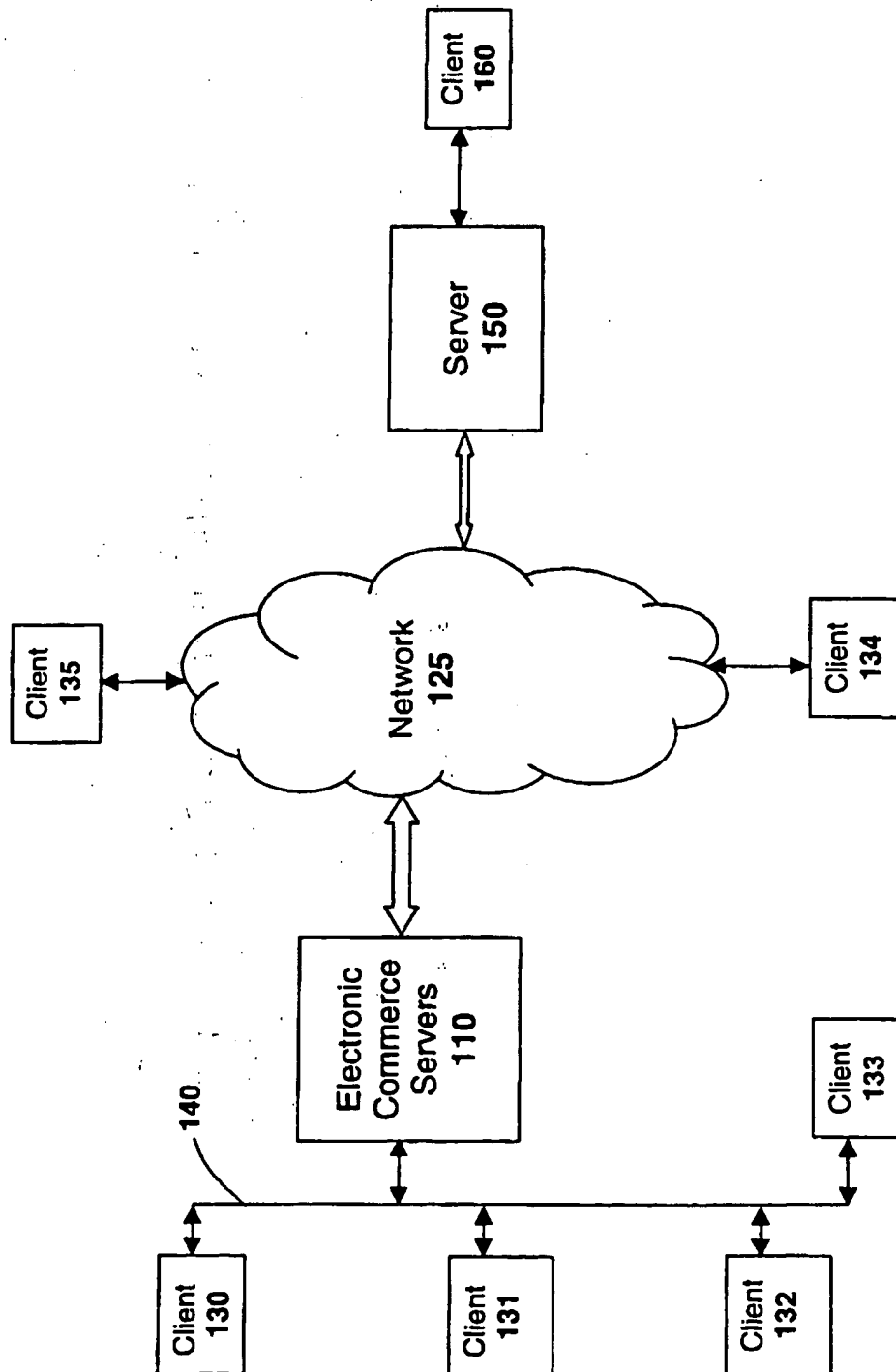
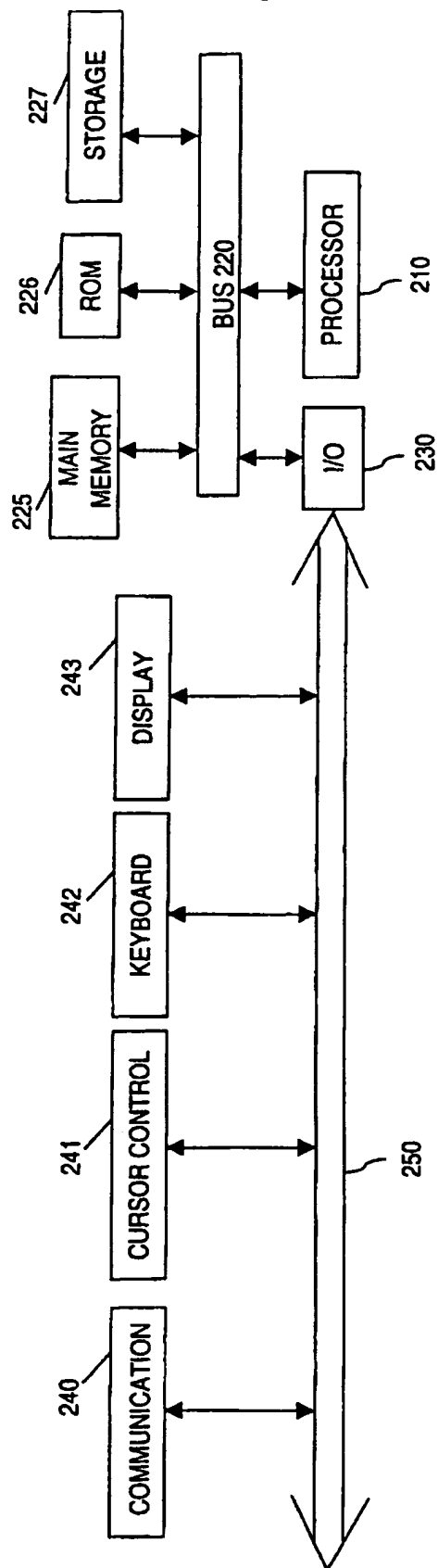


FIG. 1

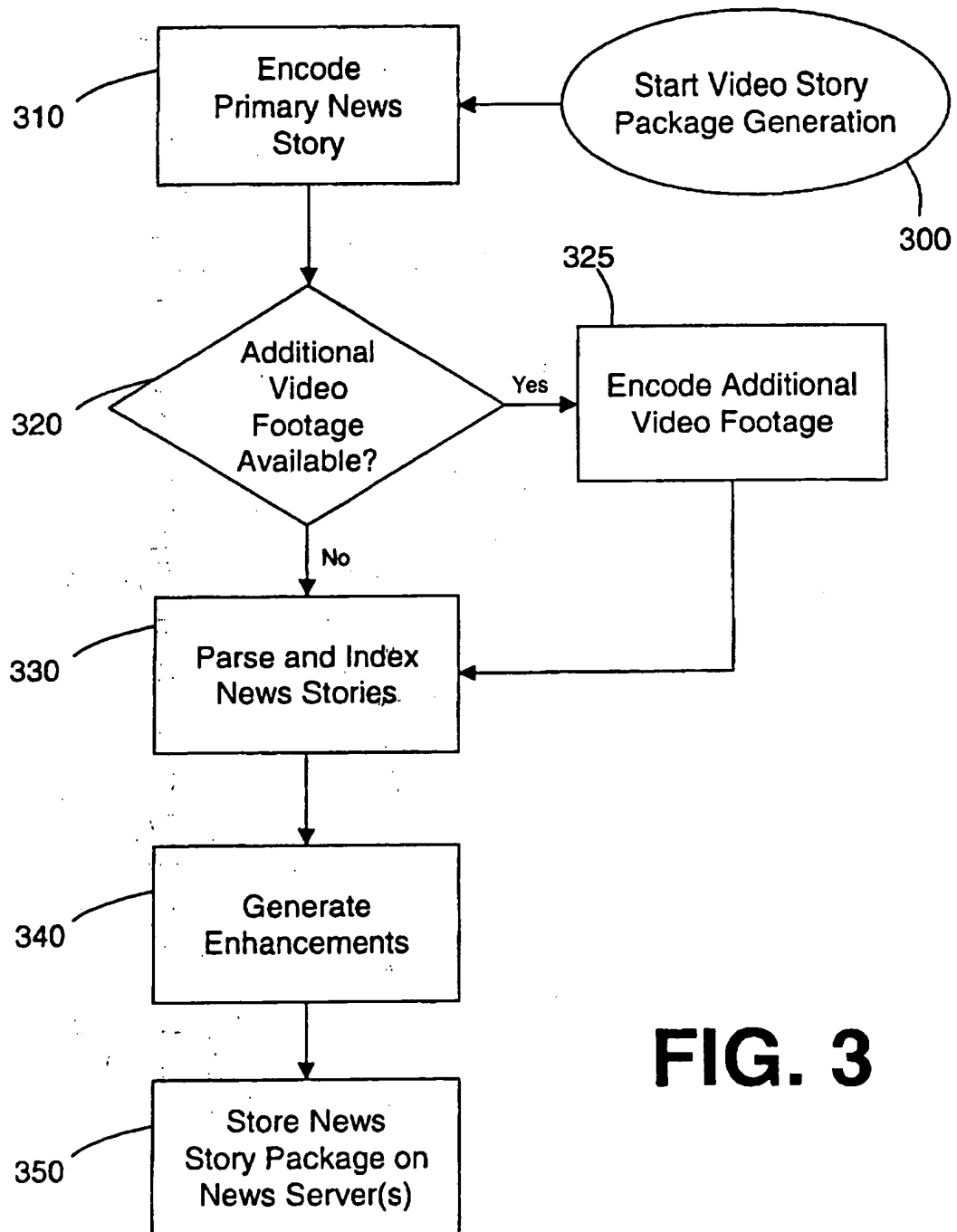
2/8

200



**FIG. 2**

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**FIG. 3**

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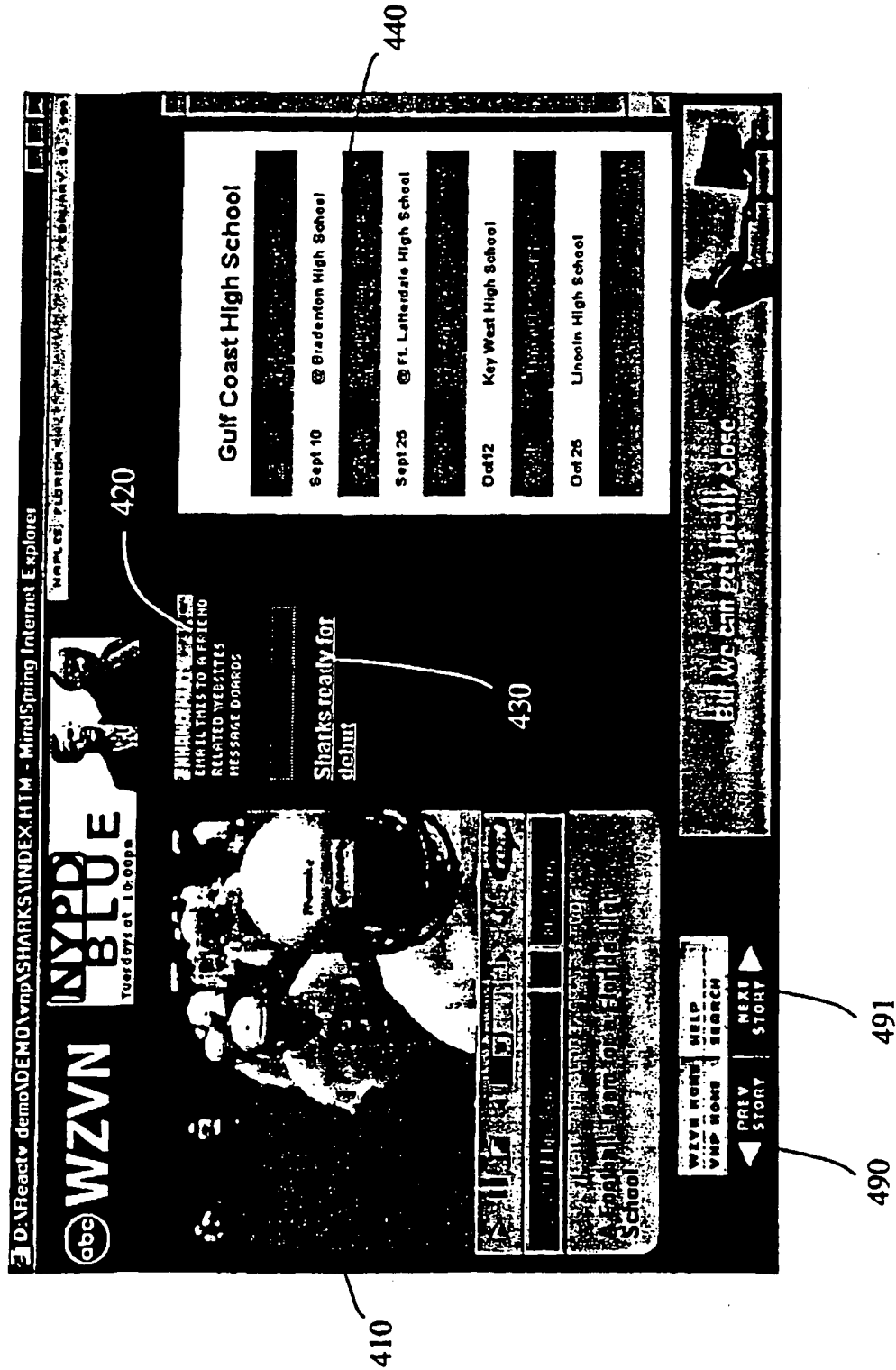


FIG. 4

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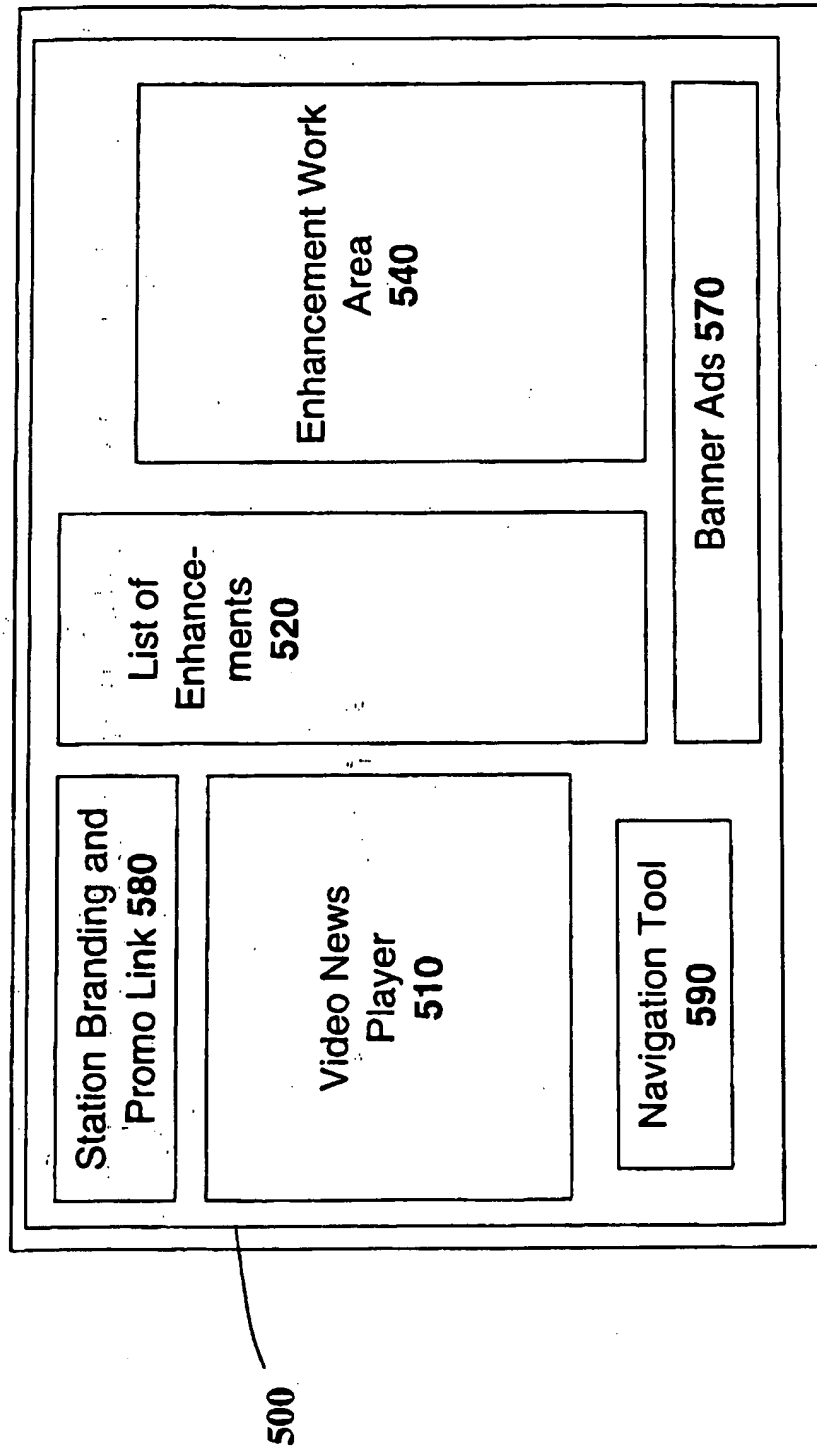


FIG. 5

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**Gillette**

**MACH3**

The Closest Shave...In Fewer Strokes...  
With Less Irritation...

Enter your email address below  
and we'll send you a free Mach III razor!

First Name:

Last Name:

Email:

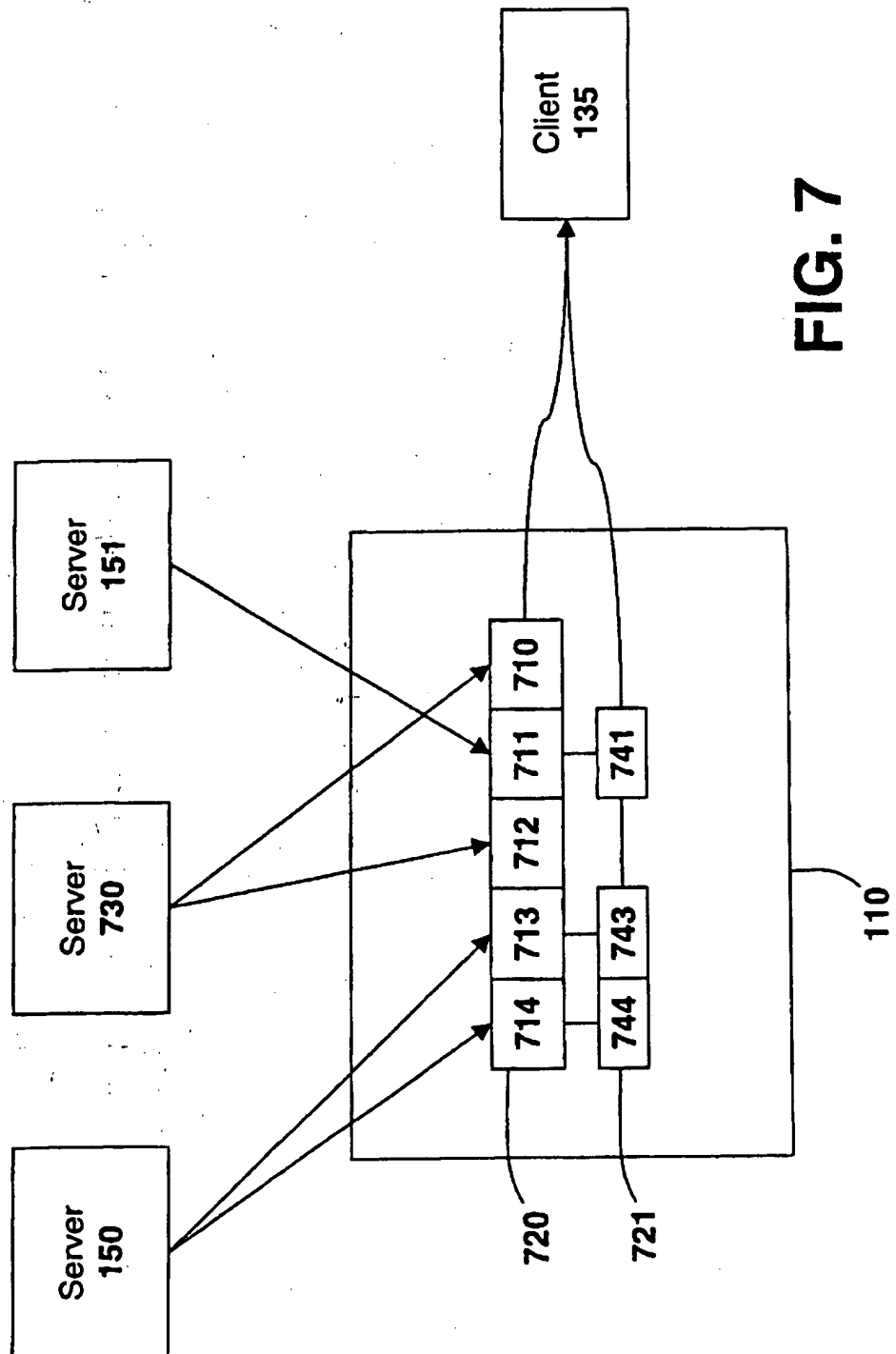
These fields require a last name, whole e-mail address, and conditions.

CLICK HERE TO CONTINUE NEWSCAST ▶

FIG. 6

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820 830 840

**WZVH.com** **yourWZVN newscast** **Apr 18, 1999**

You are currently logged in as: **John Smith** • CHANGE SESSION PARAMETERS

**PLAY ALL CLIPS NOW**

**HEADLINES** **ADDITIONAL STORIES**

☒ **ATM Thieves Caught in Ditchel Robbery Attempt:** The latest in a string of ATM robberies in southwest Florida occurred last night in Punta Gorda. (WZVN) **2:07**

☒ **Boot Camp for Juvenile Delinquents:** A progressive Florida program called the Bont Camp has a remarkable success rate reforming underage criminals. (WZVN) **3:04**

☒ **Denny's Restaurant Again Charged** **0:17**

**OTHER HEADLINES**

NATO aircraft hit civilian vehicles by mistake

Phosphorous Canister Comes Ashore at Sanibel Island

House Democrats begin signature drive on campaign finance

**EDIT/NEW PROFILE HELP SEARCH**

**INSTRUCTIONS**

De-select a specific segment by clicking the corresponding check box.

To add a segment to your newscast, click on the headlines listed under "OTHER HEADLINES".

Once you have the desired newscast, click the Play button at the bottom of the segment list.

**Member login** **Username** **Password**

**McWorld.com**

**YOU ARE AT RISK**

**810**

FIG. 8

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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US00/14190

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 15/16

US CL :709/219, 203, 206, 226; 705/14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 709/219, 203, 206, 226; 705/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

west

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,E	US 6,122,658 A (CHADDHA) 19 September 2000	1-31
A,E	US (6,094,677 A (CAPEK ET AL) 25 July 2000	1-31
A,P	US 6,065,047 A (CARPENTER ET AL) 16 May 2000	1-31
A,E	US 6,101,486 A (ROBERTS ET AL) 08 August 2000	1-31
A	US 5,818,510 A (COBBLEY ET AL) 06 October 1998	1-31

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*B* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

30 SEPTEMBER 2000

Date of mailing of the international search report

30 OCT 2000

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Form PCT/ISA/210 (second sheet) (July 1998)\*